

Claims

What is claimed is:

- 5 1. An aqueous butadiene polymer latex prepared by emulsion polymerization of at least 60 weight percent dichlorobutadiene in the presence of a stabilizer selected from styrene sulfonic acid, styrene sulfonate, poly(styrene sulfonic acid) or poly(styrene sulfonate), wherein the weight percent is based on the weight of total monomers used to prepare the butadiene polymer.
- 10 2. A latex according to claim 1 wherein the dichlorobutadiene comprises 2,3-dichloro-1,3-butadiene.
- 15 3. A latex according to claim 1 wherein the stabilizer comprises poly(styrene sulfonate).
4. A latex according to claim 1 wherein the butadiene polymer is prepared by copolymerization of the dichlorobutadiene with at least one copolymerizable monomer.
- 20 5. A latex according to claim 4 wherein the copolymerizable monomer is selected from α -haloacrylonitrile, α,β -unsaturated carboxylic acid, alkyl-2-haloacrylate, α -bromovinylketone, vinylidene chloride, vinyl toluene, vinyl naphthalene, vinyl ether, vinyl ester, vinyl ketone, ester amide, or nitrile of (meth)acrylic acid.
- 25 6. A latex according to claim 5 wherein the copolymerizable monomer comprises an α -haloacrylonitrile.
7. A latex according to claim 1 further comprising effecting the emulsion polymerization in the presence of an anionic surfactant.
- 30 8. An aqueous adhesive composition comprising an aqueous butadiene polymer latex prepared by emulsion polymerization of at least one butadiene monomer in the presence

of a stabilizer selected from styrene sulfonic acid, styrene sulfonate, poly(styrene sulfonic acid) or poly(styrene sulfonate).

5 9. An adhesive composition according to claim 8 wherein the butadiene monomer is selected from 2,3-dichloro-1,3-butadiene; 1,3-butadiene; 2,3-dibromo-1,3-butadiene; isoprene; 2,3-dimethylbutadiene; chloroprene; bromoprene; 2,3-dibromo-1,3-butadiene; 1,1,2-trichlorobutadiene; cyanoprene; or hexachlorobutadiene.

10 10. An adhesive composition according to claim 9 wherein the butadiene monomer comprises 2,3-dichloro-1,3-butadiene.

11. An adhesive composition according to claim 8 wherein the stabilizer comprises poly(styrene sulfonate).

15 12. An adhesive composition according to claim 8 wherein the butadiene polymer is prepared by copolymerization of the dichlorobutadiene with at least one copolymerizable monomer.

20 13. An adhesive composition according to claim 12 wherein the copolymerizable monomer comprises an α -haloacrylonitrile.

14. An adhesive composition according to claim 8 further comprising effecting the emulsion polymerization in the presence of an anionic surfactant.

25 15. An adhesive composition according to claim 10 wherein the stabilizer comprises poly(styrene sulfonate) and further comprising effecting the emulsion polymerization in the presence of an anionic surfactant.

30 16. An adhesive composition according to claim 8 wherein the butadiene polymer latex is prepared by emulsion polymerization of at least 60 weight percent dichlorobutadiene monomer.

17. An aqueous composition comprising the following ingredients:

- (a) an aqueous butadiene polymer latex prepared by emulsion polymerization of at least one butadiene monomer in the presence of a stabilizer selected from styrene sulfonic acid, styrene sulfonate, poly(styrene sulfonic acid) or poly(styrene sulfonate); and
- (b) a phenolic resin.

18. A composition according to claim 17 wherein the butadiene monomer is selected from 2,3-dichloro-1,3-butadiene; 1,3-butadiene; 2,3-dibromo-1,3-butadiene; isoprene; 2,3-dimethylbutadiene; chloroprene; bromoprene; 2,3-dibromo-1,3-butadiene; 1,1,2-trichlorobutadiene; cyanoprene; or hexachlorobutadiene.

19. A composition according to claim 18 wherein the butadiene monomer comprises 2,3-dichloro-1,3-butadiene.

20. A composition according to claim 17 wherein the stabilizer comprises poly(styrene sulfonate).

21. A composition according to claim 17 wherein the butadiene polymer is prepared by copolymerization of the dichlorobutadiene with at least one copolymerizable monomer.

22. A composition according to claim 21 wherein the copolymerizable monomer comprises an α -haloacrylonitrile.

23. A composition according to claim 17 further comprising effecting the emulsion polymerization in the presence of an anionic surfactant.

24. A composition according to claim 19 wherein the stabilizer comprises poly(styrene sulfonate) and further comprising effecting the emulsion polymerization in the presence of an anionic surfactant.

25. A composition according to claim 17 wherein the butadiene polymer latex is prepared by emulsion polymerization of at least 60 weight percent dichlorobutadiene monomer.

5 26. A method for making an aqueous butadiene polymer latex comprising emulsion polymerizing at least 60 weight percent dichlorobutadiene in the presence of a stabilizer selected from styrene sulfonic acid, styrene sulfonate, poly(styrene sulfonic acid) or poly(styrene sulfonate), wherein the weight percent is based on the weight of total monomers used to prepare the butadiene polymer.

10 27. A method according to claim 26 wherein the dichlorobutadiene comprises 2,3-dichloro-1,3-butadiene.

28. A method according to claim 26 wherein the stabilizer comprises poly(styrene sulfonate).

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29. A method according to claim 26 wherein the butadiene polymer is prepared by copolymerization of the dichlorobutadiene with at least one copolymerizable monomer.

20 30. A method according to claim 29 wherein the copolymerizable monomer is selected from α -haloacrylonitrile, α,β -unsaturated carboxylic acid, alkyl-2-haloacrylate, α -bromovinylketone, vinylidene chloride, vinyl toluene, vinyl naphthalene, vinyl ether, vinyl ester, vinyl ketone, ester amide, or nitrile of (meth)acrylic acid.

25 31. A method according to claim 30 wherein the copolymerizable monomer comprises an α -haloacrylonitrile.

32. A method according to claim 26 further comprising effecting the emulsion polymerization in the presence of an anionic surfactant.

30 33. A method according to claim 32 wherein the anionic surfactant is selected from an alkyl sulfonate or alkyl aryl sulfonate.

34. A method according to claim 33 wherein the anionic surfactant comprises a sulfonic acid or salt of an alkylated diphenyl oxide.